

In the Claims

The following presentation of Claims replaces all previous versions.

We claim:

1. (currently amended) A method of assessing the infectivity status of a host infected with HIV, from a sample taken from the host, comprising:
 - a. measuring independently of each other the number of cells in the sample which are expressing cell-surface gp120 and the number of lymphocytes in said sample which are CD4 positive;
 - b. combining the result of the measurement of the number of cells expressing cell-surface gp120 and the result of the measurement of the number of lymphocytes which are CD4 positive;
wherein the infectivity status of the host is assessed from the combination of the result of the measurement of the number of cells expressing cell-surface gp120 and the result of the measurement of the number of lymphocytes which are CD4 positive.
2. (original) A method of claim 1, wherein the infectivity status is represented by the number of cells expressing cell-surface gp120 per unit volume divided by the number of cells which are CD4 positive per unit volume.
3. (original) A method of claim 1, wherein the measuring is accomplished by flow cytometry.
4. (previously presented) A method of wherein the measuring is accomplished by a fluorescence resonance energy transfer assay.
5. (original) A method of claim 1, wherein the cells are peripheral blood mononuclear cells.
6. (original) A method of claim 1, further comprising: combining an effective amount of an anti-gp120 antibody attached to a first detectable label and an effective amount of an anti-CD4 antibody attached to a second detectable label under conditions effective for said antibodies to bind gp120 and CD4 respectively.
7. (original) A method of claim 6, wherein said measuring is accomplished by flow cytometry.
8. (currently amended) A method of detecting lymphocytes expressing cell-surface gp120 in an aqueous sample containing viral infected cells displaying gp120, comprising:
 - a. combining to form a mixture:
 - i. an effective amount of a first antibody, comprising an anti-gp120 antibody, wherein the first antibody is attached to a detectable label,
 - ii. an effective amount of a second antibody, comprising an label-antibody specific for said detectable label, wherein said label-second antibody is attached to a magnetic particle, and
 - iii. the sample;
 - b. incubating said mixture under conditions effective for (i) binding of said anti-gp120first antibody to gp120 on said cells, and (ii) for binding of said second antibody specific for said detectable label to said detectable label attached to said anti-gp120 antibody, to form a complex, wherein said anti-gp120first antibody is bound to said gp120 displayed on a viral infected cell;
 - c. separating said complex by applying a magnetic field to said mixture, whereby said complex is retained by said magnetic field, and
 - d. determining the presence of magnetically separated lymphocytes expressing cell-surface gp120.
9. (original) A method of claim 1, wherein the CD4 count of said host is less than 200/mm³ of whole blood.
10. (original) A method of claim 1, wherein the host has been treated with HAART.
11. (currently amended) A method of determining the infectivity status of a host infected with HIV virus who has tested negative in a virus co-culture assay, comprising: measuring the fraction of lymphocytes expressing cell-surface gp120 and the fraction of lymphocytes which are CD4 positive, and assessing the infectivity status of the host from a combination of the measurements of the two fractions.
12. (original) A method of claim 11, wherein the measuring is accomplished by flow cytometry.

Response to 1/25/2005 Office Action; Application No. 09/893,604; page 2

13. (original) A method of claim 11, wherein the measuring is accomplished by a fluorescence resonance energy transfer assay.
14. (original) A method of claim 11, wherein the cells are peripheral blood mononuclear cells.
15. (original) A method of claim 11, further comprising: combining an effective amount of an anti-gp120 antibody attached to a first detectable label and an effective amount of an anti-CD4 antibody attached to a second detectable label under conditions effective for said antibodies to bind gp120 and CD4 respectively.
16. (original) A method of claim 15, wherein said measuring is accomplished by flow cytometry.
17. (canceled)

Response to 1/25/2005 Office Action; Application No. 09/893,604; page 3